

US Army Corps  
of Engineers  
Kansas City District

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**KANSAS CITY DISTRICT  
CORPS OF ENGINEERS**

**and**

**ELWOOD-GLADDEN DRAINAGE DISTRICT, EASTERN DONIPHAN COUNTY,  
KANSAS AND NORTHWESTERN BUCHANAN COUNTY, MISSOURI**

**Public Law 84-99 of the Flood Control Act of 1944**

**Levee Rehabilitation – NEPA Review, Environmental  
Assessment & Finding of No Significant Impact**

**MISSOURI RIVER LEVEE SYSTEM UNITS  
471-460R, FEDERAL LEVEE  
REHABILITATION PROJECT**

**May 2008**



**DEPARTMENT OF THE ARMY  
KANSAS CITY DISTRICT, CORPS OF ENGINEERS  
700 FEDERAL BUILDING  
KANSAS CITY, MISSOURI 64106-2896**

## **Finding of No Significant Impact**

### **Missouri River Levee System Units 471-460R, Elwood- Gladden Drainage District, Eastern Doniphan County, Kansas and Northwestern Buchanan County, Missouri Levee Rehabilitation Project May 2008**

#### **Project Summary**

The U.S. Army Corps of Engineers (USACE), Kansas City District, in cooperation with the project sponsor, Elwood-Gladden Drainage District, Kansas and Missouri, proposes to rehabilitate the Missouri River Levee System Unit No. 471-460R under the authority of Public Law 84-99 of the Flood Control Act of 1944. The project area is located in the Eastern Doniphan County of Kansas and the Northwestern Buchanan County of Missouri, along the right descending bank of the Missouri River, river mile 441.7 to 456.6. During the May 2007 flood event, severe damages to the levee unit occurred. The project damages consist of loss of vegetative cover on areas of the levee's riverside slopes and minor erosion riverward of the levee. The recommended plan would consist of seeding and mulching and repair of eroded levee slopes.

#### **Alternatives**

Alternative 1 (Recommended Plan). This alternative would consist of seeding the areas of the riverside slope and the immediate foreshore within the permanent right-of-way that were subject to grass kill as a result of the flood event. The repair actions for the replacement of lost vegetative cover on the riverward slopes would consist of the placement of 70 acres of spray herbicide, fertilizer, grass seeds and mulch. In addition, the proposed action would consist of repairing the eroded levee slope and foreshore areas at stations 420+50 and 423+20. This repair action would consist of placement of 290 tons of bedding rock and 820 tons of 18-inch rip-rap on the riverward slope. No fill would be placed in the river. The Missouri River is approximately 100 ft from the levee. Any existing grass vegetation on the slope would be cleared prior to placement of bedding and rip-rap. The eroded areas of the levee would be graded and sloped using 125 cubic yards (cy) of fill (sediment) taken from an existing stockpile area. The stockpile area was created by the Levee District from removing excess sediment from a nearby drainage ditch.

"No Action" Alternative- Under the "No Action" alternative, the USACE would not repair the damage to the levee caused by the May 2007 flood event.

## Summary of Environmental Impacts

The proposed levee repair action would result in short-term, minor noise disturbance to wildlife resources during construction activities. Overall, these minor impacts are greatly offset by restoring the flood risk management capability and its associated social and economic benefits of the existing levee system. Projects impacts to other environmental resources were determined to be no effect.

## Mitigation Measures

The recommended plan would not result in significant adverse impacts to mitigable resources as defined in the USACE Planning regulations or under Section 404 of the Clean Water Act. Fill activities would not involve placement in or removal of fill from wetlands or waters of the U.S. Under this plan, there would be no impacts to wetlands or the aquatic ecosystem. In addition, there would be no removal of trees. Therefore, no mitigation measures are warranted or proposed.

## Public Availability

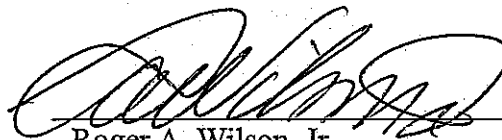
Prior to a decision on whether to prepare an Environmental Impact Statement, the USACE circulated a Notice of Availability (Notice) of the Environmental Assessment (EA) and Finding of No Significant Impact (FONSI), dated May 30, 2008, with a thirty-day comment period ending on June 30, 2008 to the public and resource agencies. The Notice was e-mailed to individuals/agencies/businesses listed on USACE-Regulatory Branch's e-mail mailing list. The Notice informed these individuals that the EA and FONSI were available on the USACE webpage or that they could request a hard copy of the EA and FONSI in order to provide comment. No comments were received.

## Conclusion

After evaluating the anticipated environmental, economic, and social effects of the proposed activity, it is my determination that construction of the proposed Missouri River Levee System Units No. 471-460R Rehabilitation Project to restore vegetation and eroded levee ramps that occurred after the May 2007 flood event, does not constitute a major Federal action that would significantly affect the quality of the human environment; therefore, preparation of an Environmental Impact Statement is not required.

Date:

10 July 08



Roger A. Wilson, Jr.  
Colonel, Corps of Engineers  
District Commander



**DEPARTMENT OF THE ARMY**  
**KANSAS CITY DISTRICT, CORPS OF ENGINEERS**  
**700 FEDERAL BUILDING**  
**KANSAS CITY, MISSOURI 64106-2896**

**EXECUTIVE SUMMARY**

The U.S. Army Corps of Engineers, Kansas City District, in cooperation with the project sponsor, Elwood-Gladden Drainage District, Kansas and Missouri, proposes to rehabilitate the Missouri River Levee System Unit No. 471-460R under the authority of Public Law 84-99 of the Flood Control Act of 1944. The project area is located in the Eastern Doniphan County of Kansas and the Northwestern Buchanan County of Missouri, along the right descending bank of the Missouri River, river mile 441.7 to 456.6. During the May 2007 flood event, severe damages to the levee unit occurred. The project damages consist of loss of vegetative cover on areas of the levee's riverside slopes and minor erosion riverward of the levee. The recommended plan would consist of seeding and mulching and repair of eroded levee slopes.

The proposed levee repair action would result in short-term, minor noise disturbance to wildlife resources during construction activities. Overall, these minor impacts are greatly offset by restoring the flood risk management capability and its associated social and economic benefits of the existing levee system. Projects impacts to other environmental resources were determined to be no effect. The recommended plan would not result in significant adverse impacts to mitigable resources as defined in the USACE Planning regulations or under Section 404 of the Clean Water Act.

Prior to a decision on whether to prepare an Environmental Impact Statement, the USACE circulated a Notice of Availability (Notice) of the Environmental Assessment (EA) and Draft Finding of No Significant Impact (FONSI), dated May 30, 2008, with a thirty-day comment period ending on June 30, 2008 to the public and resource agencies. The Notice was e-mailed to individuals/agencies/businesses listed on USACE-Regulatory Branch's e-mail mailing list. The Notice informed these individuals that the EA and Draft FONSI were available on the USACE webpage for review or that they could request the EA and Draft FONSI in writing, in order to provide comment. No comments were received.

Additional information concerning this project may be obtained from Ms. Lekesha Reynolds, Environmental Resources Specialist, PM-PR, Kansas City District - U.S. Army Corps of Engineers, by writing the above address, or by telephone at 816-389-3160.

**NEPA REVIEW  
ENVIRONMENTAL ASSESSMENT  
&  
FINDING OF NO SIGNIFICANT IMPACT**

**MISSOURI RIVER LEVEE SYSTEM UNITS 471-460R, ELWOOD-GLADDEN  
DRAINAGE DISTRICT, EASTERN DONIPHAN COUNTY, KANSAS AND  
NORTHWESTERN BUCHANAN COUNTY, MISSOURI  
LEVEE REHABILITATION PROJECT**

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**MISSOURI RIVER LEVEE SYSTEM UNITS NO. 471-460R  
LEVEE REHABILITATION PROJECT  
EASTERN DONIPHAN COUNTY, KANSAS AND NORTHWESTERN BUCHANAN  
COUNTY, MISSOURI  
MAY 2008**

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**Section 1: INTRODUCTION**

This Environmental Assessment provides information that was developed during the National Environmental Policy Act (NEPA) public interest review of the proposed Public Law 84-99 Missouri River Levee System Units No. 471-460R Levee Rehabilitation Project.

**Section 2: AUTHORITY**

The Kansas City District – U.S. Army Corps of Engineers (USACE), in cooperation with the project sponsor, Elwood-Gladden Drainage District of Doniphan County, Kansas and Buchanan County, Missouri, propose to construct the Missouri River Levee System Unit 471-460R Levee Rehabilitation Project under the authority of Public Law 84-99 of the Flood Control Act of 1944.

**Section 3: PROJECT LOCATION**

The project area is located in the Eastern Doniphan County of Kansas and the Northwestern Buchanan County of Missouri, along the right descending bank of the Missouri River, river mile 441.7 to 456.6.

**Section 4: GENERAL DESCRIPTION**

The approximately 72,800 linear feet of earthen levee protects approximately 13,000 acres, of which about 7,200 acres are planted in crops. In addition to agriculture, nearly one-fourth of the total area is given over to public/industrial land uses that include Rosecrans Airport as well as the base for the 139th Airlift Wing of the Missouri Air National Guard. Several large plants also are located within the protected area, including a grocery wholesaler, a home retail supplier, two manufacturers, a construction company, and a warehousing and storage operation. Also protected are the town of Elwood, Kansas, and a portion of the town of Wathena, Kansas. All together, approximately 667 homes and 124 businesses and public facilities are protected, along with about 27 miles of roads. This total includes several miles of U.S. Highway 36 as well as numerous county roads.

## **Section 5: PROJECT DAMAGES**

During the May 2007 flood event, severe damages to the levee unit occurred. The project damages consist of loss of vegetative cover on areas of the levee's riverside slopes and minor erosion riverward of the levee.

**Table 1. Loss of Vegetative Cover on the Riverward Slope:**

Sta. 0+00 thru Sta. 402+50	38.8 acres
Sta. 405+50 thru Sta. 420+50	1.2 acres
Sta. 423+50 thru Sta. 708+50	30 acres
Total	70 acres

## **Section 6: PURPOSE & NEED FOR ACTION**

The project purpose and need is to rehabilitate the damaged levees and restore the associated social and economic benefits. Repair of the levee would restore an estimated level of protection in excess of 100 years.

## **Section 7: ALTERNATIVES**

Alternative 1 (Recommended Plan). This alternative would consist of seeding the areas of the riverside slope and the immediate foreshore within the permanent right-of-way that were subject to grass kill as a result of the flood event. The repair actions for the replacement of lost vegetative cover on the riverward slopes would consist of the placement of 70 acres of spray herbicide, fertilizer, grass seeds and mulch. In addition, the proposed action would consist of repairing the eroded levee slope and foreshore areas at stations 420+50 and 423+20. This repair action would consist of placement of 290 tons of bedding rock and 820 tons of 18-inch rip-rap on the riverward slope. No fill would be placed in the river. The Missouri River is at least 100 ft from the levee. Any existing grass vegetation on the slope would be cleared prior to placement of bedding and rip-rap. However, soil disturbance would be less than one acre (0.6 acres). The eroded areas of the levee would be graded and sloped using 125 cubic yards of fill taken from an existing stockpile area. The stockpile area was created by the Levee District from removing excess sediment from a nearby drainage ditch.

"No Action" Alternative- Under the "No Action" alternative, the USACE would not repair the damage to the levee caused by the May 2007 flood event.

## **Section 8: NATIONAL ENVIRONMENTAL POLICY ACT REVIEW**

As part of the NEPA review for the proposed project, USACE circulated a Notice of Availability (Notice) of the Environmental Assessment (EA) and Finding of No Significant Impact (FONSI), dated May 30, 2008, with a thirty-day comment period ending on June 30, 2008 to the public and resource agencies. The Notice was e-mailed to individuals/agencies/businesses listed on USACE-Regulatory Branch's e-mail mailing list. The Notice informed these individuals that the EA and FONSI were available on the USACE webpage or that they could request the EA and

FONSI in writing, in order to provide comment. The following section will be completed pending comments received and evaluated from coordination of the Notice:

No comments were received.

#### **Section 9: AFFECTED ENVIRONMENT:**

The area behind the levee is mainly comprised of agricultural lands. Small pockets of riparian trees and vegetation are interspersed along the riverward extent of the levee, near the Missouri River. Typical trees found within this area include willows, cottonwoods and sycamores. In addition, various wildlife species occupy these pockets of riparian vegetation such as small furbearing species, white tail deer, and various birds, including neo-tropical migrants.

Primary resources of concern identified during the evaluation included: water quality, fish and wildlife, threatened and endangered species, riparian vegetation, wetlands, archeological and historical resources, flood control, and economics. Projects impacts to other resources were determined to be no effect.

#### **Section 10: ENVIRONMENTAL CONSEQUENCES:**

##### **Water Quality**

With the implementation of the recommended plan, there would be no adverse impacts to water quality. No fill would be placed in the river, or adjacent waters of the U.S. The Missouri River is at least 100 ft from the levee.

Under the "No Action" Alternative, the damaged sod covers and eroded levees would not be repaired. Failure to repair the levees could result in minor, long term adverse impacts to water quality from increased erosion and runoff of pollutants from industrial sources, pesticides, petroleum products, and non-point sources of human and animal wastes.

##### **Fish and Wildlife**

With the implementation of the recommended plan, noise during seeding and construction activities may disturb wildlife in the area, in which wildlife such as small mammals, and birds would leave the project area and return once construction activities are completed. No impacts to fish or their habitat are anticipated to occur.

Under the "No Action" Alternative, there would be minimal impacts on fisheries and wildlife resources. These would primarily be related to flooding within the previously protected area.

##### **Threatened or Endangered Species**

The threatened or endangered federally listed species within Doniphan County, Kansas or Buchanan County, Missouri include the Indiana bat (*Myotis sodalis*) (E), pallid sturgeon (*Scaphirhynchus albus*) (E), Eskimo curlew (*Numenius borealis*), Piping plover (*Charadrius*



*melodus*), Least tern (*Sterna antillarum*), and American burying beetle (*Nicrophorus americanus*). The Bald eagle (*Haliaeetus leucocephalus*) is no longer federally listed, but is still protected under the Bald and Golden Eagle Act and Migratory Bird Treaty Act.

The USACE has determined that no adverse effects on any federally-listed threatened or endangered species or their habitat would occur with the proposed levee repair work. No impacts to any state listed endangered species or their habitat were identified.

Under the "No Action" Alternative, there would be no impacts to endangered or threatened species since the project area does not contain habitat to support these listed species.

### **Riparian Woodlands/Vegetation**

The recommended plan would restore the grassed-levee slopes that existed prior to the declared flood event of 2007. No removal of trees is proposed, therefore, there would be no impacts to woodlands. Best management practices would be used to minimize the spread of invasive species by requiring that all equipment be thoroughly cleaned and dried before being brought on and off site.

The "No Action" Alternative could result in increases to the floodplain and to floodplain vegetation if lands are abandoned from farming due to the high risk of flooding. Overtime, successional vegetative growth could result in large expanses of floodplain forest.

### **Wetlands/ Aquatic Habitat**

The recommended plan would have no impacts on wetlands or the aquatic habitat. Fill activities would not involve placement in or removal of fill from wetlands or waters of the U.S. Under this plan, there would be no impacts to wetlands or the aquatic ecosystem.

The "No Action" Alternative could result in minor benefits to existing wetlands located on the flood plain within the protected area as these areas would be subject to a high level risk of future flooding.

### **Archeological and Historical Resources**

A cultural resources review of the proposed levee repairs for the L 471-460 levee rehabilitation in E. Doniphan County, Kansas and NW Buchanan, Missouri was conducted by the Kansas City District archeologist. No sites listed on or eligible for listing on the National Register of Historic Places are located within or near the proposed project area. Since all repair impacts would be limited to the existing levee facility, the proposed project would have no potential to impact historic properties. Therefore, no coordination with the Missouri and Kansas State Historic Preservation Offices (SHPO) is required for the project. If project plans change and a new right-of-way or borrow is required, then SHPO coordination would be required.

If in the unlikely event that any archeological materials are discovered during project construction, work in the area of discovery would cease and the discovery would be investigated

by a qualified archeologist. In addition, the findings on the discovery would be coordinated with the SHPO offices and appropriate federally recognized Native American tribes.

The "No Action" Alternative would result in no effects to archaeological or historical resources.

### **Floodplain**

The proposed action would not directly or indirectly support more development in the floodplain or encourage additional occupancy and/or modification of the base floodplain. Furthermore, the Corps has determined that the recommended plan complies with the intent of Executive Order 11988.

The "No Action" Alternative would continue to expose all public and private infrastructure protected by the levee prior to the flood damage to a high level risk of future flooding.

### **Economics**

The recommended plan would restore damaged sod cover and aggregate surfacing to the existing levee system. Public and private infrastructure protected by the levee prior to the flood damage would continue to be protected against a 100-year flood event. Economic conditions are unlikely to change from those of pre-damage levee conditions with the repair of this levee system.

The "No Action" Alternative has a zero benefit to cost ratio and would continue to expose all public and private infrastructure protected by the levee prior to the flood damage to a high level risk of future flooding. The area would continue to suffer the effects of a levee with a dramatically smaller level of protection and would be exposed to annual damages in millions of dollars.

## **Section 11: CUMULATIVE IMPACTS**

The combined incremental effects of human activity are referred to as cumulative impacts (40 CFR 1508.7). While these incremental effects may be insignificant on their own, accumulated over time and from various sources, they can result in serious degradation to the environment. The cumulative impact analysis must consider past, present, and reasonably foreseeable actions in the study area. The analysis must also include consideration of actions outside of the Corps, to include other State and Federal agencies. As required by NEPA, the Corps has prepared the following assessment of cumulative impacts related to the alternatives being considered in this EA.

Historically, the Missouri River and its floodplain has been altered by past actions such as bank stabilization, dams on the river and its tributaries, roads/bridges, agricultural and urban levees, channelization, farming, water withdrawal for human and agricultural use, urbanization and other human uses. These activities have substantially altered the terrestrial and aquatic ecosystem within the Missouri River watershed.

The USACE, which administers Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act, has issued and will continue to evaluate permits authorizing the placement of fill material in the Waters of the United States and/or work on, in, over or under a navigable water of the United States including the Missouri River and its tributaries.

The repairs of damaged levees are expected to continue in the future as unpredictable flood events of the Missouri River occur. Environmental resources typically affected by levee repair actions such as these may include wetlands, fish and wildlife resources, water quality, agricultural, and riparian woodlands. However, the impacts to these resources are usually minor and short term, and minor and long-term.

The proposed action would involve restoring the grassed slopes and eroded banks on Missouri River Levee System Unit 471-460R that was damaged during the May 2007 flood to its pre-existing conditions. The proposed levee repair action would result in short-term, minor noise disturbance to wildlife resources during construction activities. However, the environmental resources of the project area have been altered and disturbed by past actions; the proposed levee repairs are minor, short-term or minor, long-term, and are a part of maintaining the pre-existing condition of the levee system after a flood event. Overall, these minor impacts are greatly offset by restoring the flood risk management capability and its associated social and economic benefits of the existing levee system. In addition, the proposed action would not directly or indirectly support more development in the floodplain or encourage additional occupancy and/or modification of the base floodplain. Thus, no significant cumulative impacts associated with the proposed rehabilitation of the existing levee system have been identified.

## **Section 12: MITIGATION MEASURES**

The recommended plan would not result in significant adverse impacts to mitigable resources as defined in USACE Planning regulations or under Section 404 of the Clean Water Act. Fill activities would not involve placement in or removal of fill from wetlands or waters of the U.S. Under this plan, there would be no impacts to wetlands or the aquatic ecosystem. In addition, there would be no removal of trees. Therefore, no mitigation measures are warranted or proposed.

## **Section 13: COMPLIANCE WITH ENVIRONMENTAL QUALITY STATUTES**

The Compliance with Designated Environmental Quality Statutes that have not been specifically addressed earlier in this report is covered in Table 2. Additional information is listed for the most pertinent statutes following the table.

**Table 2**  
**Compliance of Preferred Alternative with Environmental Protection**  
**Statutes and Other Environmental Requirements**

<b>Federal Policies</b>	<b>Compliance</b>
Archeological Resources Protection Act, 16 U.S.C. 470, et seq.	Full Compliance
Clean Air Act, as amended, 42 U.S. C. 7401-7671g, et seq.	Full Compliance
Clean Water Act (Federal Water Pollution Control Act), 33 U.S.C. 1251, et seq.	Full Compliance
Coastal Zone Management Act, 16 U.S.C. 1451, et seq.	Not Applicable
Endangered Species Act, 16 U.S.C. 1531, et seq.	Full Compliance
Estuary Protection Act, 16 U.S.C. 1221, et seq.	Not Applicable
Federal Water Project Recreation Act, 16 U.S.C. 4601-12, et seq.	Full Compliance
Fish and Wildlife Coordination Act, 16 U.S.C. 661, et seq.	Full Compliance
Land and Water Conservation Fund Act, 16 U.S.C. 4601-4, et seq.	Not Applicable
Marine Protection Research and Sanctuary Act, 33 U.S.C. 1401, et seq.	Not Applicable
National Environmental Policy Act, 42 U.S.C. 4321, et seq.	Full Compliance
National Historic Preservation Act of 1966, as amended, 16 U.S.C. 470a, et seq.	Full Compliance
Rivers and Harbors Act, 33 U.S.C. 403, et seq.	Full Compliance
Watershed Protection and Flood Prevention Act, 16 U.S.C. 1001, et seq.	Full Compliance
Wild and Scenic River Act, 16 U.S.C. 1271, et seq.	Not Applicable
Farmland Protection Policy Act, 7 U.S.C. 4201, et seq.	Full Compliance
Protection & Enhancement of the Cultural Environment (Executive Order 11593)	Full Compliance
Floodplain Management (Executive Order 11988)	Full Compliance
Protection of Wetlands (Executive Order 11990)	Full Compliance
Environmental Justice (Executive Order 12898)	Full Compliance

**NOTES:**

- a. Full compliance. Having met all requirements of the statute for the current stage of planning (either preauthorization or postauthorization).
- b. Partial compliance. Not having met some of the requirements that normally are met in the current stage of planning.
- c. Noncompliance. Violation of a requirement of the statute.
- d. Not applicable. No requirements for the statute required; compliance for the current stage of planning.

**Clean Water Act, Section 404 and 401**

The recommended plan does not involve placement of fill material in a Water of the United States and therefore, Clean Water Act, Section 401 Water Quality Certification and Section 404b1 are not required.

**Clean Water Act, Section 402**

A Section 402, construction stormwater permit is not required because soil disturbance is less than one acre (0.6 acre).

**Endangered Species Act, Section 7**

The USACE has made a determination that no impacts to any federally listed threatened or endangered species or their habitat would occur with the project action. Coordination of ESA would be completed upon review of this EA and concurrence of this determination with the USFWS.

**National Historic Preservation Act**

No sites listed on or eligible for listing on the National Register of Historic Places are located within or near the proposed project area. Therefore, no SHPO coordination with the Missouri or Kansas State Historic Preservation Office (SHPO) is required for the project.

**Section 14: CONCLUSION**

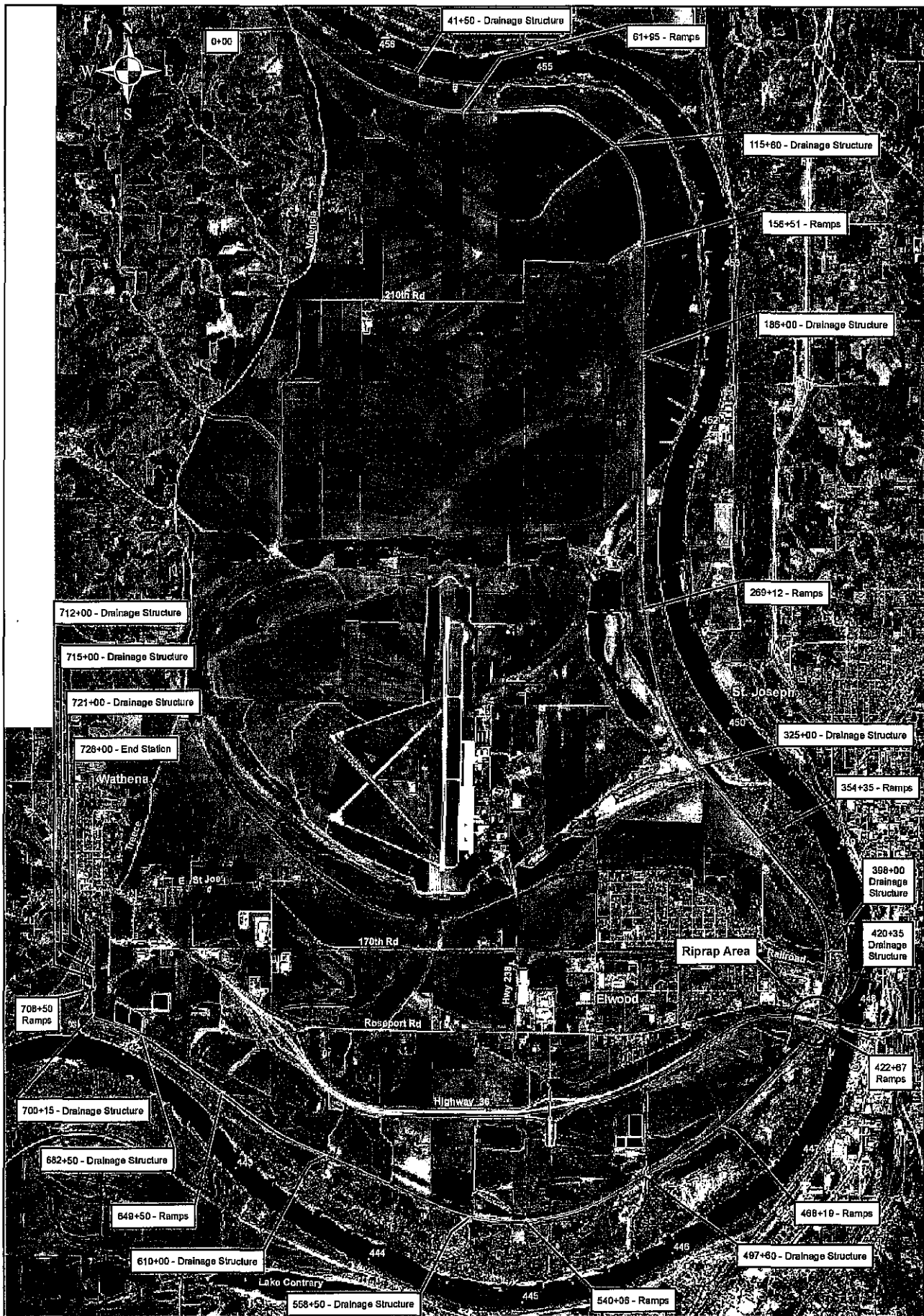
The proposed levee repair action would result in short-term, minor noise disturbance to wildlife resources during construction activities. Overall, these minor impacts are greatly offset by restoring the flood risk management capability and its associated social and economic benefits of the existing levee system. Projects impacts to other environmental resources were determined to be no effect.

**Section 15: PREPARERS**

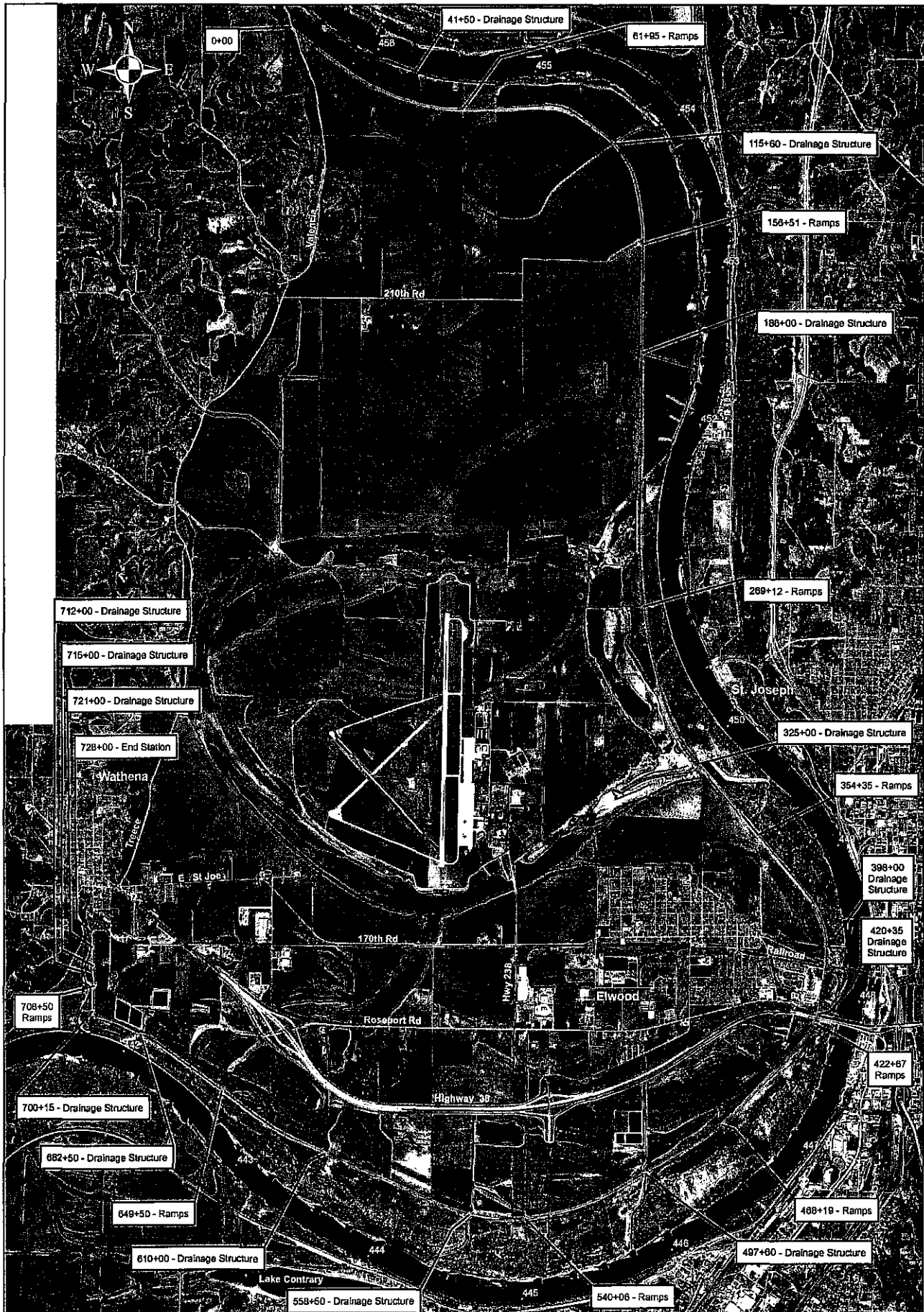
This EA and the associated draft FONSI was prepared by Ms. Lekesha Reynolds (Environmental Resource Specialist), with relevant sections prepared by Mr. Timothy Meade (Cultural Resources). The address of the preparers is: U.S. Army Corps of Engineers, Kansas City, District; PM-PR, Room 843, 601 E. 12<sup>th</sup> St, Kansas City, MO 64106.

# **APPENDIX I – PROJECT DRAWINGS**

*Missouri River Levee System Unit 471-460R,  
Federal Levee Rehabilitation Project,  
Doniphan County, Kansas and  
Buchanan County, Missouri  
May 2008*



MISSOURI RIVER LEVEE SYSTEM  
Levee Unit R 471-460



MISSOURI RIVER LEVEE SYSTEM  
Levee Unit R 471-460